

ABSTRACT

A projection beam PB is projected onto a substrate W via a mask MA. The direction dependence of the intensity of the beam at the substrate W is controlled by passing the beam through a series of optical elements 120a-b in front of a pupil plane 14. The intensity distribution as a function of position in the pupil plane 14 determines the angle dependence at the substrate W. The optical elements 120a-b, which are preferably arrays of microlenses (or more particularly DOE's: Diffractive Optical Elements) each define an angle dependence of the intensity of the beam PB. The optical elements 120a-b are each arranged to pass a major part of the beam PB substantially without deflection and a minor part with a deflection angle dependent intensity. The major part of the beam is blocked out of the beam behind the series of optical elements 120a-b. As a result an addition of the effects of upon the intensity in the pupil plane 14 is realized.